

Claim

1. A lever system cover for sealing a vessel, the cover
2 fittable to the vessel, the vessel having receiving
3 members, the lever system cover comprising:
4 a rotatable lever locating plate attached to the cover; and
5 multiple lever bars attached to the lever locating plate,
6 whereby the rotatable lever locating plate is rotated
7 moving multiple lever bars into engagement with receiving
8 members on the vessel and the lever bars being leveragable
9 to clamp the cover.

2. A lever system cover for sealing a vessel,
2 the cover fittable to the vessel, the vessel having
3 receiving members, the lever system cover comprising:
4 a rotatable lever locating plate attached to the cover; and
5 multiple lever bars attached to the lever locating plate,
6 whereby the rotatable lever locating plate is rotated
7 moving multiple lever bars into engagement with receiving
8 members on the vessel and the lever bars being
9 leverageable to provide leverage to clamp the cover.

3. The lever system cover according to claim 2 wherein
2 the cover has a convex underside.

4. The lever system cover according to claim 2 further

2 comprising a clamp for leveraging the lever bars.

5. The lever system cover according to claim 2 further
2 comprising a clamp operable for leveraging lever bars to
3 locking positions.

6. The lever system cover according to claim 2 further
2 comprising a safety locking mechanism preventing rotation of
3 lever locating plate in reverse unless safety locking
4 mechanism is disabled.

7. The lever system cover according to claim 6 wherein
2 the safety locking mechanism has a handle that provides
3 positive locking.

8. The lever system cover according to claim 6 wherein
2 the safety locking mechanism further comprises a valve to
3 allow and prevent control flow into and from filter
4 housing.

9. The lever system cover according to claim 2 further
2 comprising lid lifting mechanism pivotably attached to the
3 housing.

10. The lever system cover according to claim 9 wherein
2 the lid lifting mechanism is counterbalanced.

11. The lever system cover according to claim 2 wherein
2 the receiving members on the vessel are C-shaped.

12. The lever system cover according to claim 2 further
2 comprising a multiplicity of handles on the lever locating
3 plate for rotating the levers between a locked position
4 against the receiving members and an unlocked position.

13. A method of using the lever system cover according to
2 claim 2 comprising the following steps:
3 lowering the cover assembly into position onto the vessel
4 and placing the cover onto the vessel opening;
5 rotating the lever locating plate moving the locking lever
6 bar ends into engagement with the hooks/receiving
7 members;
8 moving safety handle into locking position preventing
9 lever locating plate movement and operating the safety
10 valve; and
11 operating clamp mechanism by screwing the clamp nut
12 down, putting force on the levers to seal the cover
13 against the vessel.

14. A method of using the lever system cover according to
2 claim 2 comprising the following steps:
3 operating clamp mechanism by unscrewing the clamp nut,
4 releasing force on the levers to unseal the cover against
5 the vessel;
6 moving safety handle into unlocking position allowing
7 lever locating plate movement and operating the safety
8 valve;
9 rotating the lever locating plate moving the locking lever
10 bar ends away from engagement with the hooks/receiving
11 members; and
12 raising the cover assembly from position on the vessel
13 and removing the cover from the vessel opening.

15. A lever system cover for sealing a vessel, the cover
2 fittable to the vessel, the lever system cover comprising:
3 a rotatable lever locating device attached to one of
4 the cover and the vessel; and
5 multiple lever bars attached to the other of one of the
6 cover and the vessel;
7 the multiple lever bars attached to the lever locating
8 device,
9 whereby the rotatable lever locating device is rotated
10 moving multiple lever bars into engagement with receiving
11 members and the lever bars being leveragable to clamp the
12 cover.